

## **Statement of Basis**

**Permit to Construct No. P-2016.0046  
Project ID 61762**

**FMI – EPS, LLC  
Jerome, Idaho**

**Facility ID 053-00005**

**Final**

**August 23 2016**

**Tom Burnham**

**Permit Writer**



The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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## ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
Btu	British thermal units
CAA	Clean Air Act
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
HAP	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lbs	pounds
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
PC	Permit condition
PM	particulate matter
PM <sub>2.5</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SCL	significant contribution limits
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
T/yr	tons per consecutive 12 calendar month period
T/mo	tons per month
T2	Tier II operating permit
TAP	toxic air pollutants
VOC	volatile organic compounds

## **FACILITY INFORMATION**

### ***Description***

FMI – EPS, LLC produces expanded polystyrene (EPS) bead products. The EPS raw material (beads) arrives in 1,000-pound boxes. The beads are vacuum fed to the pre-expander where they are partially expanded to their desired density, using steam from a natural gas-fired boiler. Steam is used to heat the beads and to release pentane, which is the encapsulated blowing agent contained within the beads. Expanded beads are aged in the prepuff storage for a period between 6 to 48 hours, to allow the prepuff to stabilize. The material is then transferred into molds where, using steam, the beads are fused together into desired shapes, based on the mold forms. The molded shapes are then cut to their final size and shape, and stored. Each step of the process results in pentane emissions.

Volatile organic compounds (VOC) emissions, as pentane, are emitted from the processes and equipment referenced above, the above referenced equipment is hereafter referred to as "process equipment".

### ***Permitting History***

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

June 8, 2006	P-060406 issued to convert T2-030407 to T2/PTC Combo (A, but will be S upon issuance of this permit)
June 21, 2004	T2-030407 issued for modification to add new equipment. P-053005 permit number replaced with new numbering system (S)
September 22, 2000	Initial T2 issued for emissions from EPS process (S)

### ***Application Scope***

The facility has requested to convert the existing T2/PTC Combo operating permit to a permit to construct. The T2/PTC Combo operating permit is being converted to a permit to construct in accordance with the DEQ's Standard Operating Procedure for converting Tier II operating permits to permits to construct.

No other modifications were requested by the facility.

### ***Application Chronology***

July 15, 2016	DEQ received an application and an application fee.
July 22, 2016	DEQ determined that the application was complete.
August 2, 2016	DEQ made available the draft permit and statement of basis for peer and regional office review.
August 8, 2016	DEQ made available the draft permit and statement of basis for applicant review.
August 17, 2016	DEQ received the permit processing fee.
August 23, 2016	DEQ issued the final permit and statement of basis.

## TECHNICAL ANALYSIS

### *Emissions Units and Control Equipment*

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source	Control Equipment	Emissions Point
Boiler A Manufacturer: Superior Model: 6-750 Construction date: 1996 Rated heat capacity: 6.3 MMBtu/hr Burner type: Horizontally fired Stack diameter: 14 inches Stack height: 32 feet Fuel: Natural gas	None	Boiler stack
Processing equipment	None	None

### *Emissions Inventories*

Emission inventory was developed for the EPS Expansion Process and the natural gas-fired boiler and is contained in the T2-030407 Statement of Basis dated May 7, 2004. For this permitting action of converting the permit from the T2/PTC combo permit to a PTC, toxic, hazardous, and criteria emissions have not changed.

### *Regulatory Review*

There are no newly applicable state or federal requirements. The Regulatory Review provided in the May 7, 2004 T2-030407 Statement of Basis that supports issuance of the Tier II operating permit does not change as a result of converting this T2/PTC combo permit to a PTC and is not repeated in this statement of basis.

The T2/PTC combo permit is being converted to a PTC in accordance with the DEQ's Standard Operating Procedure for converting Tier II operating permits to permits to construct.

### *Ambient Air Quality Impact Analyses*

No modeling is required for this permit because there is no emissions increase.

### *Permit Conditions Review*

This section describes the permit conditions for those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

#### Permit Condition 3.7

The requirement for calculating actual throughput of beads was change from "daily and annually" to "daily and monthly".

There are no new permit conditions resulting from this permitting action, and "SOP – Existing T2 to PTC Conversion" internal guidance document was followed. General Provisions were updated as a result of this permitting action.

## PUBLIC REVIEW

Because this permitting action does not authorize an increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04.

## APPENDIX A – PROCESSING FEE

**Company:** FMI - EPS  
**Address:** 280 Rose St  
**City:** Jerome  
**State:** ID  
**Zip Code:** 83338  
**Facility Contact:** Chris Heil  
**Title:** General Manager  
**AIRS No.:** 053-00005

**N** Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N

**N** Did this permit require engineering analysis? Y/N

**N** Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

<b>Emissions Inventory</b>			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO <sub>x</sub>	0.0	0	0.0
SO <sub>2</sub>	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	<b>0.0</b>
Fee Due	<b>\$ 250.00</b>		